

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 18 JUN 2004

WIPO PCT

Applicant's or agent's file reference EMBR-012	FOR FURTHER ACTION		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)
International application No. PCT/BR 03/00041	International filing date (day/month/year) 20.03.2003	Priority date (day/month/year) 22.03.2002	
International Patent Classification (IPC) or both national classification and IPC F04B35/04			
Applicant EMPRESA BRASILEIRA DE COMPRESSORES S/A - EMBRACO			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 15.10.2003	Date of completion of this report 21.06.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Ingelbrecht, P Telephone No. +31 70 340-2256 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/BR 03/00041

1. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-7 as originally filed

Claims, Numbers

1-12 as originally filed

Drawings, Sheets

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	6-12
	No: Claims	1-5
Inventive step (IS)	Yes: Claims	
	No: Claims	1-12
Industrial applicability (IA)	Yes: Claims	1-12
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following document/s/:

D1: FR 743 398 A (TEVES GMBH) 29 March 1933 (1933-03-29)

D2: PATENT ABSTRACTS OF JAPAN vol. 2000, no. 20, 10 July 2001 (2001-07-10) -& JP 2001 073942 A (LG ELECTRONICS INC), 21 March 2001 (2001-03-21)

2. Document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and discloses (the references in parentheses applying to this document): A reciprocating compressor driven by a linear motor comprising a shell, within which are mounted: a reference assembly formed by a motor (8) and a cylinder; a resonant assembly formed by a piston (11) reciprocating inside the cylinder, and by an actuating means operatively coupling the piston to the motor; and two spring means (9) mounted to the resonant assembly and to the reference assembly and which are elastically and axially deformed in the displacement direction of the piston, wherein the reciprocating compressor comprises a mounting element (10) coupling an end of one spring means (9) to an end of the other spring means (9); and a coupling element (12) which has an end mounted to the piston and an opposite end mounted to the mounting element, said mounting element carrying the ends of the two spring means coupled thereto and being axially displaced together with the piston and displaced freely and transversally to the displacement direction of the piston, said coupling element being constructed to transmit the axial forces between the piston and the mounting element and to minimise the application of radial forces to the piston.

2.1 Claim 1 therefore does not meet the requirements of the PCT with regard to novelty (Article 33(2) PCT).

2.2 Document D1 further discloses all features of claims 2-5 (Reference is made especially to page 2 line 47-57). So also claims 2-5 do not meet the requirements of the PCT with regard to novelty (Article 33(2) PCT).

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3. The subject matter of claims 6-12 concerns the integration of the teachings of document D1 in a compressor of the type disclosed in document D2. This comes within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen. Consequently, the subject-matter of claims 6-12 can not be considered as involving an inventive step (Article 33(3) PCT).
4. The reciprocating compressor according to claims 1-12 is industrially applicable.